

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 1-3, 6, 9 and 10 are currently being amended.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-11 are now pending in this application.

Amendment To The Specification

The specification is amended to correct a typographical error. No new matter is introduced.

Claims 1-11 Are Enabled

The Office Action rejected claims 1-11 under 35 U.S.C. § 112 ¶1 for lack of enablement. Reconsideration of the rejection based on the following remarks is respectfully requested.

The Examiner questioned the direction of flow in Fig. 1. As stated at the application on page 2, beginning at line 4, refrigerant flows from the condenser 4 to the expansion element 7 in AC operation (Fig. 1). That is, the flow is not in two cells, one top and one bottom, but rather clockwise around the entire circuit 2, as stated at page 3, line 35. As shown in Fig. 1, flow travels primarily vertically, with horizontal flows occurring at the very top and very bottom of circuit 2. In Fig. 1, however, the flow from 4 to 7 makes a slight horizontal detour to pass through the inner heat exchanger and another slight horizontal detour to pass back out, thus coupling it thermally with refrigerant exiting evaporator 8.

In Fig. 2 the flow direction is reversed, and refrigerant flows from expansion element 7 to evaporator 4. In this operation, however, the valves 9 bypass flow through the heat

exchanger, such that there is little thermal coupling between the vertically running branches in Fig. 2. Such valves 9 are known in the art and can be implemented by a person of ordinary skill, in possession of the Applicants' invention.

In both Fig. 1 and Fig. 2, flow is generally around the entire circuit 2, and not divided into top and bottom flows. In Fig. 1, the flow passes through the inner heat exchanger 5, whereas in Fig. 2 this heat exchanger is bypassed. This is observable by following the flow arrows, from the head of one arrow to the next nearest arrow tail, as indicated in Fig. 1 and Fig. 2

Reconsideration of the rejection is thus respectfully requested.

Claims 1-11 Are Patentable Over Cited Prior Art

The Office Action rejected claims 1-11 over Ozu (U.S. Pat. No. 4,702,088) in view of Burk, (U.S. Pub. No. 2001/0052238). Reconsideration of the rejection is respectfully requested.

Neither Ozu nor Burk teach suggest or describe the feature recited in claim 1 that the system "further [comprises] at least one valve configured to deactivate the inner heat exchanger during heat pump operation". Ozu does not teach an inner heat exchanger, as acknowledged in the Office Action. While Burk teaches an inner heat exchanger, Burk does not suggest that the heat exchanger can be activated during AC operation and bypassed during heat pump operation. Moreover, Burk does not disclose that a valve be used for this purpose.

It is therefore respectfully submitted that not all elements of claim 1 are found in the proposed combination of references, and that the Office has therefore not established a *prima facie* case of obviousness. *See* MPEP § 2143. Claims 2-10 are dependent from claim 1 and patentable for the same reason. Claim 11 incorporates similar subject matter, that the inner heat exchanger is bypassed during heat pump operation, and is therefore patentable for similar reasons.

Amendments to the Claims

All amendments to the claims have been made only to clarify the relationship of elements to one another or to broaden the claims. The amendments were not made for reasons relating to patentability. Specifically, changes in claim 1 relating to the valve configured to deactivate the inner heat exchanger during heat pump operation are believed to broaden the scope of that claim, and were not made to overcome the combination of Ozu and Burk.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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